

near lower transit, on February 27, I estimated it at only the 8th magnitude. The small blue star near it seems always about the 9th magnitude, and affords a convenient object for comparison. I have just been informed that Secchi saw 280 of about the 8th magnitude, and suggested its variability, which may be regarded as certain; and it now remains to discover the period.

Notes on the Zodiacal Light. By the Rev. Samuel J. Johnson.

What Humboldt speaks of as the "mild pyramidally shaped zodiacal light, very visible to the unassisted eye," has been displayed here this winter with far more distinctness than I have noticed since February 21, 1870, when I witnessed a vivid appearance of the phenomenon from Lytham on the Lancashire coast.

It was conspicuous, amongst other nights, on February 8, when the impression that Tycho mistook the Light for the "abnormal vernal evening twilight," appeared at first sight almost pardonable.

February 16. Sky clear for a brief interval about 8 P.M. The conical figure very fairly defined, except at the apex, where the curvature was somewhat difficult to make out. *Mars* situated nearly on the axis; about which point, the Light seemed equal in brightness to that portion of the *Milky Way* that passes through *Cassiopeia*. Nearer the horizon, the intensity was decidedly greater, ν *Ceti* appeared just outside the cone of light; the head of *Aries* faintly involved in it. It could be traced, though with difficulty, 3° or 4° above the *Pleiades*.

February 18. Could readily be followed before the Moon set. Boundaries, so far as could be made out, the outline being indistinct, on the left θ , ν , μ *Ceti*, λ *Tauri*, then passing round the *Pleiades*, about which region the figure was very faint. On the other side 41 and α *Arietis* were just outside it. From this point the boundary line would have to be drawn through the 5th mag. stars ψ and τ *Pegasi* to the horizon. Clear extent at the base 30° to 35° . Not quite so brilliant as on the 16th. I fancied a slight reddish tinge in the brighter portions.

February 19. The Moon did not set till $9^h 14^m$, when the more conspicuous parts had descended below the horizon.

An interval of moonlight nights followed.

March 6. The Zodiacal Light again conspicuous. In extent and general features unaltered; in intensity scarcely so great. The clearest defined portion lay between ν *Ceti* and γ *Arietis*: at lower altitudes, the Light, although brighter, appeared very much diffused. *Mars* about 5° left of the axis.

March 7. With regard to the earliest visibility of the Light,

it was not noticeable till 15^m after stars of the brightness of γ *Arietis* had shone out, and not quite so soon as the *Milky Way* at equal altitudes. Its whiteness more dusky than the latter. At an altitude of about 20° η and α *Piscium* (the latter just within the boundary) were somewhat dimmed by its intensity.

Upton Helions Rectory, Crediton,
1874, March 9.

Note on the Zodiacal Light. By E. B. Knobel, Esq.

I would beg to direct attention to the unusual brilliancy of the Zodiacal Light this winter.

It is stated in text-books that the Zodiacal Light is only visible in the evenings, in this country, in the spring months; and I have repeatedly observed it in March and April, but have never seen it more brilliant than in January and February of this year.

On two clear evenings in the first week in January, on January 17, at 6 45 P.M., and lastly on February 8, at 7 P.M., it appeared as an elongated luminous cone, the apex of which on January 17 extended nearly to the star γ *Arietis*, and on February 8 the apex just enclosed η *Piscium*.

It appeared nearly as bright as the *Milky Way*, and sufficiently bright to attract the attention of a casual observer.

I should mention that my situation is quite away from the town, and sufficiently high to be above the mists of the valley.

Stapenhill, Burton-on-Trent,
1874, Feb. 11.

On the Structure of the Solar Photosphere. By S. P. Langley, Esq.

(Communicated by Mr. Lockyer.)

During some years past the spectroscopic investigation of the solar surface has furnished new and valuable results so continuously, as to engross the attention of observers almost to the exclusion of older methods. I have been led, however, to think, that much of interest remains to be reached by direct telescopic scrutiny of the Sun, and that among the facts thus to be gathered are some concerning which the spectroscope cannot inform us, and some which will aid us to interpret its indications.

It will be remembered that an interesting controversy arose